MULTIMEDIA UNIVERSITY

STUDENT ID NO.

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2017 / 2018 SESSION

PPE0044 – BASIC MICROECONOMICS

(Foundation in Business)

6 JUNE 2018
2.30p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **ELEVEN (11)** pages.
2. Answer **ALL** the questions in **Sections A and B.**
3. Shade your answers for **Section A** on the OMR sheet. Write your answers for **Section B** in the Answer Booklet.

SECTION A: MULTIPLE-CHOICE QUESTIONS [30 MARKS]

Instructions: Answer **ALL** questions in this section. Shade your answers on the **OMR** sheet.

1. Price elasticity of demand measures the responsiveness of __________.
   A. price to changes in demand
   B. price to changes in quantity demanded
   C. quantity demanded to changes in price
   D. quantity demanded to changes in income

2. The price elasticity of demand for the good is always __________ if the demand curve for a good is vertical.
   A. zero
   B. infinite
   C. between zero and one
   D. between zero and infinity

3. Which of the following would you expect to illustrate the greatest price elasticity of demand?
   A. Chair
   B. Clothing
   C. Jeans
   D. Nike clothes

Refer to ***Exhibit 1*** for question 4.

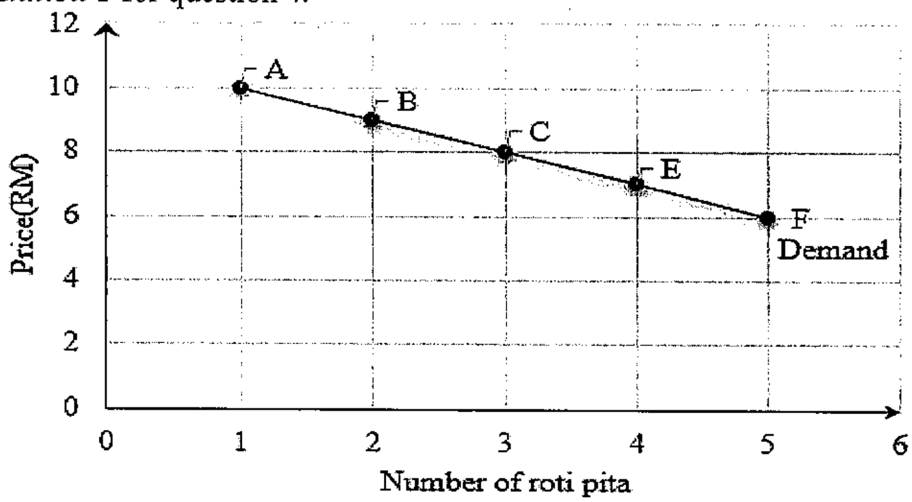

Exhibit 1

4. If the price of a roti pita is increased from RM8 to RM10, the price elasticity of demand equals __________ and __________.
   A. 2.5; elastic
   B. 4.5; elastic
   C. 0.5; inelastic
   D. 9.0; perfectly inelastic

Continued...

5. Total revenue remains constant if price __________ and demand is __________.
   A. falls; elastic
   B. rises; elastic
   C. rises; inelastic
   D. falls; unit elastic

6. If the quantity of chocolate spread demanded increases by 4% and when the price of bread decreases by 2%, the cross elasticity of demand between chocolate spread and bread is __________.
   A. 2
   B. -4
   C. -2
   D. -0.5

7. An increase in demand caused no change in the equilibrium price. Thus, supply must be __________.
   A. elastic
   B. inelastic
   C. unit elastic
   D. perfectly elastic

8. The determinants of elasticity include __________.
   A. time period
   B. price relative to income
   C. input substitution possibilities
   D. all of the above

9. A perfectly inelastic supply curve __________.
   A. is a normal situation
   B. is horizontal at the given price
   C. indicates no response in supply to price changes
   D. shows great quantity supplied responsiveness to price changes

10. At the price of RM4, quantity supplied is 120, and at the price of RM10, quantity supplied is 300. Using the midpoint formula, the price elasticity of supply is __________ and supply is __________.
   A. 3.00; elastic
   B. 0.25; inelastic
   C. 0.80; inelastic
   D. 1.0; unit elastic

11. Money payments to the owner of a firm are called __________.
   A. explicit costs
   B. implicit costs
   C. indirect costs
   D. economic costs

Continued...

12. Normal profit is defined as a (an) __________.
    A. implicit profit
    B. opportunity profit
    C. the minimum profit required to keep a firm in business
    D. none of the above

13. Which of the following might describe the behaviour of a firm's costs in the short run?
    A. Economies of scale
    B. Diseconomies of scale
    C. Constant returns to scale
    D. None of the above

14. A farmer can produce 5,000 bushels of blackcurrant on 100 acres land. Assume it adds one more acre of land and he is able to produce 6,000 bushels per season. The marginal product of the additional acre of land of this farmer is __________.
    A. 6,000 bushels per acre per year
    B. 5,000 bushels per acre per year
    C. 1,000 bushels per acre per year
    D. 11,000 bushels per acre per year

15. If 11 workers can produce a total of 52 units of a product and a 12^{th} workers has a marginal product of 8 units, then the average product of 12 workers is __________.
    A. 5 units
    B. 50 units
    C. 52 units
    D. 66 units

16. The __________ is the situation in which the marginal product of labour is greater than zero and declining as more labour is hired.
    A. law of supply
    B. law of returns to scale
    C. law of diminishing returns
    D. law of diminishing supply

Continued...

17. Refer to ***Exhibit 2***.

Labour per unit of time	Total output
0	0
1	25
2	74
3	138
4	213
5	268

Exhibit 2

Exhibit 2 shows total output for a firm when specified amounts of labour are combined with a fixed amount of capital. You are to assume that the wage per unit of labour is RM25 and the cost of the capital is RM80.The average total cost for 213 units of output is approximately __________.

A. 49 cents
B. 50 cents
C. 60 cents
D. 85 cents

18. Suppose Maggie produces 50,000 units of pen, the total cost is RM6.5million. When she increases its production of pen to 70,000 units, the total cost increases to RM9.4 million. Within this range, the marginal cost of an additional unit of output is __________.

A. RM135
B. RM145
C. RM45.50
D. RM135.50

19. Assume both the marginal cost and the average variable cost curves are U-shaped. At the minimum point on the average variable cost curve, marginal cost must be __________.

A. at its minimum
B. equal to average variable cost
C. less than average variable cost
D. greater than average variable cost

20. Which of the following is **NOT** a reason why firms experience economies of scale?

A. Larger firms may be able to purchase inputs at lower costs than smaller competitors.
B. Workers and managers can become more specialised, enabling them to be more productive.
C. Technology can make it possible to increase production with a smaller increase in at least one input.
D. As output increases, the managers can begin to have difficulty coordinating the operations of their firms.

Continued...

21. Under perfect competition, a firm is a price taker because __________.
    A. each firm has a significant market share
    B. each firm's product is perceived as different
    C. setting a price higher than the going price results in profits
    D. setting a price higher than the going price results in zero sales

22. Which of the following is a condition for profit-maximisation in a purely competitive firm?
    A. TR=TC
    B. P=MC
    C. P=AVC
    D. All of the above

Refer to ***Exhibit 3*** to answer question 23.

Quantity	Total cost (RM)
0	1,000
100	1,360
200	1,560
300	1,960
400	2,760
500	4,000
600	5,800

Exhibit 3

23. ***Exhibit 3*** shows the short-run cost data of a perfectly competitive firm that produces mobile phone cases. Assume that output can only be increased in batches of 100 units. If the market price of each mobile phone case is RM4, what is the firm's total revenue?
    A. RM1200
    B. RM3200
    C. RM4200
    D. RM4800

Continued...

Refer to ***Exhibit 4*** to answer question 24.

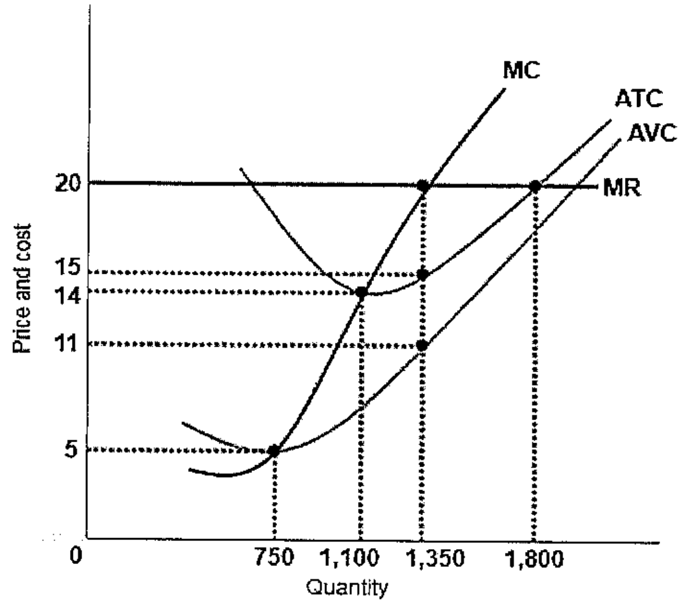

Exhibit 4

24. ***Exhibit 4*** illustrates cost and demand curves facing by a Daniel's firm in a constant-cost perfectly competitive industry. If the market price is RM20, what is the amount of profit received by Daniel's firm?
    A. RM5,400
    B. RM6,750
    C. RM8,100
    D. RM16,200

25. If total revenue exceeds fixed cost, a firm __________.
    A. is making short-run lost
    B. has covered its variable costs
    C. should produce in the short run
    D. may or may not produce in the short-run, depending on whether total revenue covers variable cost

26. If, in a perfectly competitive industry, the market price facing by a firm is above its average total cost at the output where marginal revenue equals marginal cost, then __________.
    A. firms are breaking even
    B. market supply will remain constant
    C. existing firms will exit the industry
    D. new firms are attracted to the industry

Continued...

Refer to ***Exhibit 5*** to answer question 27.

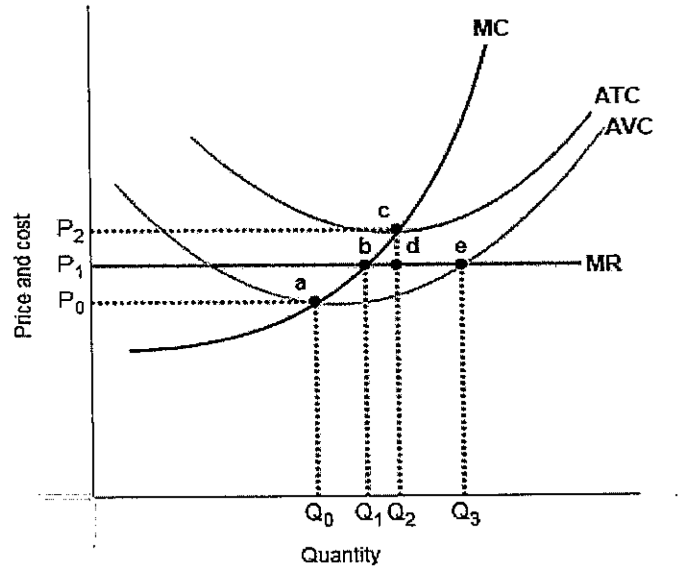

Exhibit 5

27. ***Exhibit 5*** illustrates cost and demand curves faced by a perfectly competitive firm in short run. Suppose the prevailing price is at P_1 and the firm is currently producing its loss-minimising quantity. In the long run equilibrium, __________.
    A. there will be more firms in the industry and total industry output increases
    B. there will be fewer firms in the industry but total industry output increases
    C. there will be fewer firms in the industry and total industry output decreases
    D. there will be more firms in the industry and total industry output remains constant

28. A perfectly competitive Brazil nuts farmer in a constant-cost industry produces 1,000 bushels of Brazil nuts at a total cost of RM50,000. The prevailing market price is RM48. What will happen to the market price of Brazil nuts in the long run?
    A. The price falls below RM48.
    B. The price rises above RM48.
    C. The price remains constant at RM48.
    D. There is insufficient information to answer the question.

29. Gavin is a monopolist and if he plans to sell more units of output, he must __________.
    A. reduce the price
    B. increase the price
    C. ensure demand becomes more elastic
    D. ensure the other competing firms sell fewer units

30. Monopolistic competition differs from perfect competition primarily because in __________.
    A. perfect competition, firms can differentiate their products
    B. monopolistic competition, entry into the industry is blocked
    C. monopolistic competition, there are relatively few barriers to entry
    D. monopolistic competition, firms can practice product differentiation

Continued...

SECTION B: STRUCTURED QUESTIONS [70 MARKS]

Instructions: Answer **ALL** questions in this section. Write your answers in the answer booklet provided.

Question 1

Part A

Exhibit 6 shows Eric's total utility from muffins and chocolates. The price of a muffin (M) is RM2, the price of a chocolate (C) is RM4, and Eric has RM12 a week to spend.

Muffins (M)		Chocolates (C)	
Quantity	Total Utility	Quantity	Total Utility
1	14	1	100
2	24	2	120
3	32	3	134
4	38	4	142
5	42	5	148

Exhibit 6

Based on ***Exhibit 6***,

a) calculate Eric's marginal utility (MU) and marginal utility to price ratios (MU/P) for both goods.

(10 marks)

b) refer to your answers in part (a), list all the combinations where $MU_M/P_M = MU_C/P_C$.

(2 marks)

c) if Eric buys 4 muffins and 1 chocolate a week, does he maximise his total utility? To maximise total utility, what should Eric do on the consumption of both goods? Briefly explain your answer.

(4 marks)

d) which combination of muffins and chocolates would maximise Eric's total utility? Show your working and briefly explain.

(4 marks)

Part B

a) ***Exhibit 7*** illustrates an indifference curve which can be graphed by showing various combination of pizzas and movies on axes.

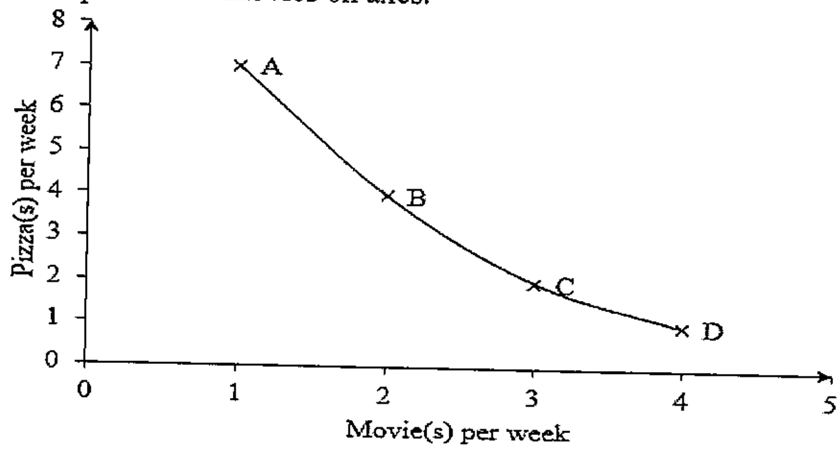

Exhibit 7

Continued...

Based on ***Exhibit 7***, explain in detail why the curve is convex towards the origin.

(3 marks)

b) ***Exhibit 8*** represents Alice's preferences for Cappucinos and Lattes, the combination of which yields the same level of utility. Alice's monthly budget for Cappucinos and Lattes is RM23. The price of Cappucino is RM1 per cup, and the price of Latte is RM2 per cup.

Combinations	Cappucinos per month	Lattes per month
A	5	11
B	10	7
C	15	4
D	20	2
E	25	1

Exhibit 8

Based on ***Exhibit 8***,

i) illustrate Alice's indifference curve, with Cappucinos on the vertical axis and Lattes on the horizontal axis. Carefully label all combinations of goods and axes.

(3.5 marks)

ii) calculate the slope of Alice's budget constraint.

(1.5 marks)

iii) find the combination of Cappucinos and Lattes that satisfies Alice's utility maximisation.

(2 marks)

[TOTAL 30 MARKS]

Question 2

Part A

Max owns a farmer's field and grows watermelons. ***Exhibit 9*** depicts Max's total product schedule using labours as its variable inputs.

No. of labour	Total product (watermelons per day)
0	0
1	10
2	25
3	38
4	48
5	55
6	60
7	63

Exhibit 9

Based on ***Exhibit 9***,

a) calculate the marginal product (MP) and average product (AP) of each labour for Max.

(3.5 marks)

Continued...

b) plot the MP and AP curve on the graph. Over what range of number of labours does MP increase?

(5 marks)

c) discuss the relationship between MP and AP.

(3 marks)

Part B

Jonathan leases a piece of land for RM120 a day and grows bananas. He pays his workers RM100 a day to pick bananas and he leases capital at RM80 a day. ***Exhibit 10*** illustrates Jonathan's daily output.

No. of labour	Output (bananas per day)
0	0
1	60
2	100
3	136
4	160
5	175

Exhibit 10

Based on ***Exhibit 10,***

a) calculate total fixed cost (TFC).

(1 mark)

b) state the formula for total costs (TC). Calculate the TC at output 0 and 100.

(3 marks)

c) calculate the average fixed costs (AFC) for all the output level.

(2.5 marks)

d) based on answers obtained in (c), what do you notice? Briefly explain your answer.

(2 marks)

Part C

Exhibit 11 depicts demand and supply in the perfectly competitive market for corn.

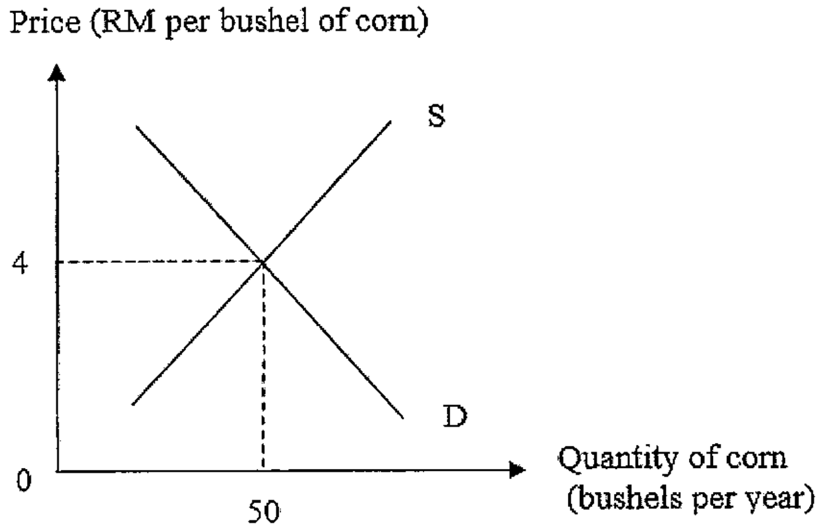

Exhibit 11

Continued...

Based on ***Exhibit 11,***

a) sketch a demand curve facing by farmer Ali, an individual producer in the market for corn.

(2 marks)

b) based on (a), do you think Ali is a price maker or price taker? Briefly explain your answer.

(2 marks)

Part D

Exhibit 12 shows the total cost schedule of Mervin's firm. Suppose his firm is operating in a perfectly competitive market. He sells his products for RM4 each.

Quantity	Total cost (RM)
0	62
10	90
20	110
30	126
40	144
50	166
60	192
70	224
80	264
90	324
100	404

Exhibit 12

Based on ***Exhibit 12***,

a) calculate
   i) marginal revenue (MR)
   ii) marginal cost (MC)
   iii) average total cost (ATC)

(7.5 marks)

b) using marginal approach, determine the profit-maximising level of output. At that level of output, what is the total revenue?

(2 marks)

c) at profit-maximising level of output, calculate the profit/loss of Mervin's firm.

(2 marks)

d) sketch a diagram to show a situation faced by Mervin's firm. Your diagram should include MR, MC, ATC and AR curves.

(4.5 marks)

[TOTAL 40 MARKS]

End of paper